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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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HOUSTON ELISEEVA 4 MILITIA DRIVE, SUITE 4 LEXINGTON, MA 02421			EXAMINER BARQADLE, YASIN M	
			ART UNIT 2153	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 09/825,139	Applicant(s) WETHERALL ET AL.	
	Examiner Yasin M. Barqadle	Art Unit 2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11-13, 17-25 and 32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-13, 17-25 and 32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to:
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

1. The amendment filed on November 20, 2006 has been fully considered but are not deemed persuasive.

Response to Amendment

2. In response to Applicant's argument in page 2, third paragraph that "there is no functionality in the Primak patent directed to routing the packet to its destination if the packet is not destined for the server of interest." Examiner respectfully disagrees. Primak teaches "Each time a request for content is received from the client 60, the dynamic content router 10 examines the header of the request for a session ID. If the request contains a session ID, the dynamic content router 10 compares the session ID against the entries in the session table 12. If the session ID of the request matches a session ID in one of the session records stored in the session table 12, the dynamic content router 10 instructs the plug-in 22b to route the request to the application server associated with the session server ID in the matching session record. However, if no matching session record is found, the dynamic content router 10 selects an application server based on some criteria, such as

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available capacity, access to a database containing the requested data, randomly, etc." (Col. 8, lines 38-51).

Therefore, Primak teaches routing a packet to a server of interest based on the session ID or other wise forward to an appropriate server based on accessing a database containing the requested data (request destination).

As to applicant's argument that combining Canion with Primak seems improbable (page 3, second paragraph). Examiner disagrees nothing in Primak precludes to drop a packet. Primak is silent about dropping a packet that is why Canion is combined with Primak to cure this deficiency.

- Claims 10,14-16 and 26-31 have been previously canceled.
- Claims 1-9,1-13,17-25 and 32 are presented for examination.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the

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art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-3,10-11,17-19,22, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Primak et al USPN (6598077) in view of Canion et al USPN. (20020108059).

As per claim 1, and 17, Primak teaches in a routing device (dynamic route 10), a method of operation comprising:

receiving a packet sent by a client device [a client's request for dynamic content to the dynamic content router. The dynamic content router then determines the appropriate application server or application cluster for the client's request based on number of factors, including but not limited to the content availability, data server's capacity and session persistence. Col. 3, lines 59 to col. 4, line 5);

determining if the packet is destined for a server of interest by reference to a destination address of the packet (When a session is established between the client and the selected application server, the dynamic content router examines the session communications to determine or extract a client identifier (also referred to herein as a content identifier). The dynamic content router utilizes the content identifier to

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determine if the client is already logged onto one of the application servers on the site col. 4, lines 16-26 and col. 6, lines 9-34); if the packet is not destined for the server of interest, routing the packet to its destination; if the packet is determined to be destined for the server of interest, routing the packet to its destination (col. 6, lines 35-43), independently determining whether said packet is a part of a conversation between the client device and the server of interest based at least in part on persistent information included in said packet [However, since the client request includes session ID, the dynamic router 10 can extract the session ID from the client request. The extracted session ID then can be used by the dynamic router 10 to search the session label 12 to find corresponding content label. That is, once the session ID is found in the session table 12, the dynamic content router can use the link to locate the content label associated with this client and thereafter determine the dynamic content based on the content label. (Col. 6, lines 9-34); and handling the packet based at least in part on the result of said independent determination by forwarding the packet to if the packet is deemed to be part of a conversation between the client and the server (col. 6, lines 9-42).

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Although Primak shows substantial features of the claimed invention as explained above, he does not explicitly show dropping the packet if the packet is deemed to be an undesirable packets.

Nonetheless, this feature is well known in the art and would have been an obvious modification of the system disclosed by Primak, as evidenced by Canion et al USPN. (20020108059). In analogous art, Canion et al whose invention is about a system for detecting incoming data packets in a network, disclose a way of determining whether to forward or drop a packet through a network in response to a conversation identifier (received packet information) to protect the network against undesirable packets. (packets with potential security violations) (§ 0174-0177 and § 0183-0187). Giving the teaching of Canion et al, a person of ordinary skill in the art would have readily recognized the desirability and the advantage of modifying Primak et al by employing the intrusion detection system of Canion et al in order to identify packets with potential security violations for the advantage of protecting the network against network security attacks such as denial of service attacks, sync attacks, ping attacks and unauthorized attacks (§ 0171 and § 0183-0187).

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As per claim 2 and 18, Primak et al teach the invention, wherein said independent determination comprises independently verifying a conversation identifier included in said packet based at least in part on other information included (col. 4, lines 16-26 and col. 6, lines 9-34).

As per claim 3 and 19, Primak et al teach the invention, wherein said independent verification comprises independently regenerating the conversation identifier using at least said other information included in said packet; and

comparing the independently re-generated conversation identifier with the included conversation identifier [col. 9, lines 20-46).

As per claim 11 and 22, Primak et al teaches a method of operation comprising:

at least one processor (10,20, 30, fig. 2);

generating an independently verifiable conversation identifier for a packet destined for a client device, using at least persistent information that will be included in said packet [col. 9, lines 20-46);

including the independently verifiable conversation identifier with said packet for use by the client device to

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include in a subsequent packet sent by the client device destined for the server [col. 4, lines 16-26 and col. 6, lines 9-34]; and

transmitting said independently verifiable conversation identifier included packet to said client device (col. 4, lines 16-26 and col. 6, lines 9-34);

Primak et al further teach a summation unit to insert the independently verifiable conversation identifier with a packet [col.7, lines 63 to col. 8, lines 9 and col. 11, lines 41-56]; determining if the packet is destined for a server of interest by reference to a destination address of the packet (When a session is established between the client and the selected application server, the dynamic content router examines the session communications to determine or extract a client identifier (also referred to herein as a content identifier). The dynamic content router utilizes the content identifier to determine if the client is already logged onto one of the application servers on the site (col. 4, lines 16-26 and col. 6, lines 9-34); if the packet is not destined for the server of interest, routing the packet to its destination; if the packet is determined to be destined for the server of interest, routing the packet to its destination (col. 6, lines 35-43), independently determining whether said packet is a part of a

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conversation between the client device and the server of interest based at least in part on persistent information included in said packet [However, since the client request includes session ID, the dynamic router 10 can extract the session ID from the client request. The extracted session ID then can be used by the dynamic router 10 to search the session table 12 to find corresponding content label. That is, once the session ID is found in the session table 12, the dynamic content router can use the link to locate the content label associated with this client and thereafter determine the dynamic content based on the content label (col. 6, lines 9-34).

Although Primak shows substantial features of the claimed invention as explained above, he does not explicitly show dropping the packet if the packet is deemed to be an undesirable packets.

Nonetheless, this feature is well known in the art and would have been an obvious modification of the system disclosed by Primak, as evidenced by Canion et al USPN. (20020108059). In analogous art, Canion et al whose invention is about a system for detecting incoming data packets in a network, disclose a way of determining whether to forward or drop a packet through a network in response to a conversation identifier (received packet information) to protect the network against undesirable

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packets (packets with potential security violations) (§ 0174-0177 and § 0183-0187). Giving the teaching of Canion et al, a person of ordinary skill in the art would have readily recognized the desirability and the advantage of modifying Primak et al by employing the intrusion detection system of Canion et al in order to identify packets with potential security violations for the advantage of protecting the network against network security attacks such as denial of service attacks, sync attacks, ping attacks and unauthorized attacks (§ 0171 and § 0183-0187).

As per claim 32, Canion et al as modified teach the invention, where the function unit (processing unit) drops packets that are not part of the conversation identifier to protect the server against receipt of undesirable packets (§ 0174-0177 and § 0183-0187).

4. Claims 4-9, 12-13 and 21, 23-25 rejected under 35 U.S.C. 103(a) as being unpatentable over Primak et al USPN (6598077) in view of Canion et al USPN. (20020108059) and further in view of Bull et al USPN (6799270) and further

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As per claims 4 and 12, although Primak et al show substantial features of the claimed invention as explained in claim 1 and 11 above, they do not explicitly show a nonce.

Nonetheless, this feature is well known in the art and would have been an obvious modification of the system disclosed by Primak et al, as evidenced by Bull et al USPN. (16799270). In analogous art, Bull et al whose invention is about a system for securely distributing session keys over a network of a chain of nodes including client nodes (14), server nodes (18) and intermediate nodes (18), disclose a bit string of data that includes a nonce (randomly generated value that is concatenated to the end of a message) that is used for identification and verification purpose [Col. 6, lines 39-50 and col. 7, lines 21-60]. Giving the teaching of Bull et al, a person of ordinary skill in the art would have readily recognized the desirability and the advantage of modifying Primak et al by employing the system of Bull et al in order to generate a unique value that identifies a client session and to verify the integrity of the response coming from the server [Col. 6, lines 39-50 and col. 7, lines 29-35].

Bull et al further teaches said re-generating the nonce using a deterministic function with a sequence number of the nonce and a plurality of persistent field values extracted from

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the packet, and a pre-provided secret value as inputs to the deterministic function [Col. 5, lines 9-34 and Col. 6, lines 7-65].

As per claims 5, 13 and 24, Primak et al teach the invention, wherein said plurality of persistent field values comprise one or more of a source address, a destination address and a port number [client session (packet) with web server inherently includes a source address, a destination address and a port number].

As per claim 6, Bull et al further teach the invention as explained in claim 4 above, wherein the method further comprises at least one of receiving into said routing device said secret value, and equipping/configuring said routing device with said deterministic function [Col. 5, lines 9-34 and Col. 6, lines 7-65].

As per claim 7 and 25, Bull et al further teaches the invention, wherein said independent generation is performed using a selected one of a message authentication code function and an universal hash function [col. 5, lines 39 to Col. 6, lines 7-47].

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As per claim 8, Primak et al as modified teach the invention, wherein the method further comprises recording a time of first observation for the nonce if the nonce is a newly observed nonce [col. 9, lines 20-67].

As per claim 9, Primak et al as modified teach the invention, wherein the method further comprises determining if time has elapsed more than a predetermined threshold since a time of first observation was recorded for the nonce, if the extracted nonce and the independently generated nonce are deemed to be the same [col. 9, lines 20-67].

As per claims 20-21 and 23, these claims include similar limitations as claim 4 and 12 above. Therefore, they are rejected with the same rationale.

Conclusion

5. **ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this

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action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

The prior made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yasin Barqadle whose telephone number is 571-272-3947. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Burgess can be reached on 571-272-3949. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-746-7238 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or public PAIR system. Status information for unpublished applications is available through private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YB

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ABDULHAKIM SALAD
PRIMARY EXAMINER